1989

Causal Factors in United States Postwar Defense Spending--The Empirical Dimension: A Note

Looney, R.E.

The cases of Equatorial Guinea, Dominica, Haiti, Suriname and the Maldives illustrate another point. Small size, isolation or a combination of the two do not necessarily signal either impotence or total disinterest on the part of other states. Spain helped to thwart the effort against Equatorial Guinea, the United States prevented the operations against Dominica, Haiti and Suriname, and India responded immediately to the call for help from the Maldives (with the United States in the wings). Indeed, given the Marxist orientation of the Bourtese government in Suriname, the worldview of the Reagan Administration, and an ongoing insurrection, according to the Thomas–Mockler perspective one should have expected the United States government to exercise a benign blindness rather than actively acting to quash the operation.

Still, the Maldives incident does furnish some confirmation of Mockler's prophecy about a possible change in the base of recruitment. Postcolonial conflicts have involved considerable numbers of combatants. The appropriate questions here concern surplus and skills.

A close examination of the past 10 years will reveal that few, if any, Third World conflicts have generated an abundance of trained soldiers free to peddle their talents as they choose. The dynamics of attrition, residual fear and ideology associated with the inter-state conflicts have assured that few soldiers have had the option or inclination to free-lance. This conclusion applies with particular force to soldiers with specialized skills. The same holds true with respect to other contemporary guerrilla–insurgent hostilities.

The intriguing new possibility, however, stems from the speculation that this raid signals a permutation that no one has foreseen—rebels willing to sell their services as experienced soldiers on the open market as a means to finance their operations. In a world awash with instability, this may signal yet another dimension to "low-intensity conflict."

NOTES

A. Mockler, *The New Merceneries*. Sidgwick & Jackson, London (1985).
J. L. Taulbee, Raiders of the leased art: a note on mercenary coup-strike forces. *Conflict* 7, 197–210 (1986).
G. Thomas, *Mercenary Forces in Modern Africa*. Westview Press, Boulder, CO (1984).

Defense Analysis Vol. 5, No. 2, pp. 155–157, 1989
Printed in Great Britain

0743–0175/89 $3.00 + 0.00

Causal Factors in United States Postwar Defense Spending: the Empirical Dimension

ROBERT E. LOONEY and STEVEN MEHAY
Naval Postgraduate School, Monterey, CA 93943, USA

In the March 1988 issue of *Defense Analysis* E. Schneider presented a comprehensive discussion concerning the causal factors in affecting United States defense expenditures during the postwar era.[1] Schneider hypothesized that the main factors requiring attention were: (1) international events (2) changing administrations, (3) public opinion, (4) elite perceptions, (5) congressional attitudes, (6) domestic economic constraints, (7) perceptions of the Soviet

threat, (8) arms control agreements, (9) elections, and (10) inter-service rivalries. For completeness we might add factors such as domestic economic stabilization policies and NATO burden sharing.

Obviously each of the factors makes *a priori* sense. However, whether or not a given factor makes a significant contribution to our understanding of the movements in US military expenditures is clearly an empirical issue. A major problem lies in the fact that, because of deficiencies in the data, several of the factors are probably not capable of being empirically tested (elite perceptions, public opinions, congressional attitudes, and perhaps arms control agreements). Using those variables that can be expressed in quantitative terms, we have attempted to determine the relative strength of each factor in affecting US defense expenditures over the 1965–1985 period.[2] The purpose of this Professional Note is to present the main findings of that analysis.[3]

As a general proposition we hypothesized that United States military expenditures adjust over time to bridge the gap between what US officials consider to be the optimal level of defense capability and that which exists at any time. The optimal level of preparedness is assumed to be a function of events such as Vietnam and the Soviet threat. The speed at which the gap between actual and optimal levels is bridged is not only a function of inertia of the federal purchase processes,[4] but also conditioned by domestic economic constraints. Factors such as European NATO defense expenditures, detente, inter-service rivalries and perhaps the election cycle and/or whether a Republican or Democratic administration is in power were then added structural factors that vary from time to time.

Multiple-regression analysis was performed using three alternative measures of defense effort: (a) actual expenditures, (b) authorized expenditures, and (c) budgetary requests. Our main empirical results[5] indicate that:

(1) By themselves, Vietnam and the perceived Russian threat account for about 72% of the variation in actual US defense expenditures. The explained variation falls off to 64% for authorized expenditures and 48% for requested defense expenditures.

(2) Taking into account domestic economic constraints contributes another 21% to our understanding of actual military expenditures. Two explanatory variables representing economic constraints increase the explained variations in authorized and requested military expenditures by 24 and 31%, respectively. However, the lagged budget deficit is no longer significant in the case of authorized expenditures, while both lagged deficits and deviations from the trend in federal revenues are insignificant for requested expenditures.

(3) European NATO defense expenditures, and inter-service rivalry and political factors add an additional 5.7% to our understanding of actual military expenditures. In contrast European NATO expenditures and the election cycle add 11.1% to our understanding of authorized expenditures, while European NATO defense expenditures and inter-service rivalry explain an additional 18.3% of the variance in requested expenditures.

(4) All of the political variables decrease in their relative significance as we progress through the budgetary cycle from requests to authorizations, and finally to the actual expenditures stage. In contrast is the pattern of an increasing number of significant economic constraints as we progress from the budgetary stage to authorizations and finally to actual expenditures. Interestingly enough, the election cycle is significant only at the authorization stage—it does not affect requests or the final expenditures.

In general therefore it appears that US military expenditures are mainly determined by external threat, and security considerations. As the budgetary process proceeds, however, economic constraints become increasingly

numerous. At the final stage, political variables enter somewhat marginally to determine the actual level of military expenditure undertaken in any year.

Alternative models, particularly those stressing the "Military Keynesianism"[6] (economic stabilization) aspect of defense expenditures were also tested, i.e. if military expenditures are used to offset fluctuations in the domestic economy, the deviations from the trend term should be negative and statistically significant.

No evidence was found to support the use of military expenditures as a tool for domestic stabilization—strategic factors inducing the Soviet threat, European NATO defense expenditures and economic considerations account for most of the observed movement in US defence expenditure.

As a basis of comparison regression equations similar to those above were estimated for nonmilitary US military expenditures. Again, a distinction was made between actual, authorized and requested expenditures.

In general, the results indicate a number of sharp contrasts with those obtained for military expenditures:

(1) Nonmilitary expenditures do not experience a distributed lag pattern, so that a gradual adjustment of expenditures bridging the gap between actual and desired levels of expenditures does not seem to play a role in the US budgetary process.

(2) Nonmilitary expenditures are used for stabilizing the domestic economy.

(3) As with military expenditures, budgetary constraints become generally more significant at the final or actual stages of the budgetary process. However, the budget deficit is positively correlated with nonmilitary expenditures. Unexpected inflation does not appear to dampen nonmilitary expenditures as it did allocations to the military.

(4) The election cycle appears quite significant in affecting nondefense allocations at the actual stage of expenditure, but not at the request or authorized stages of the budgetary process.

(5) Military expenditures are apparently in conflict with nonmilitary expenditures at the request stage of the cycle, but by the time actual allocations are made they do not detract from nonmilitary allocations.

It appears that US military expenditures while constrained by economic conditions are largely determined by strategic and threat considerations. Nonmilitary expenditures have tended to expand with the overall long-run expansion of the economy, but in the short run are also used to offset fluctuations around this long-run trend. In addition political factors enter in around election time to reinforce these patterns.

NOTES

1. E. Schneider, Causal factors in variations in US postwar defense spending. *Defense Analysis* **4**, 53–79.
2. The period for which comparable data for all variables was available.
3. The method of analysis was a multiple regression time series. A Cochraine–Orcutt transformation was used to correct for serial correlation. See R. Pindyck and D. Rubinfield, *Ecometric Methods and Economic Forecasts*, 2nd edition. McGraw-Hill, New York (1981). The complete results, together with the underlying data base, are available upon request from the authors.
4. G. Miller and S. Able, Defense spending and economic activity. *Federal Reserve Bank of Kansas City, Economic Review*, pp. 3–14 (July/August 1980).
5. Military expenditure data are in constant dollars and were derived from United States Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers* [Arms Control and Disarmament Agency, Washington, DC (various issues)]. Economic data were taken from the International Monetary Fund, *International Financial Statistics Yearbook* [International Monetary Fund, Washington, DC (various issues)]. Estimates are for the period 1965–1985.
6. Cf. J. Treddenick, The arms race and military Keynesianism (*Canadian Public Policy*, pp. 77–92) for a application of this concept to Canadian defense expenditures.